Northwoods Journal – September 2015

A Free Publication about Enjoying and Protecting Marinette County's Outdoor Life

In This Issue:

What I learned from Conservation Camp

By: Peyton Klose

I learned many things at Sand Lake Conservation Camp, like how to build a bird house and how to fish with a fake worm (below at far left).

My favorite activity was archery because I think I am going to go bow hunting and I love archery. When everyone had free time I went down to the lake to go fishing, but when I needed a new worm I needed help so a counselor helped me and taught me how to string a worm on a hook. I also liked when I got to go swimming. There was a raft and even though I didn't go on it, I still had a lot of fun!

I made many new friends at camp too – most in my cabin but some from other cabins. I know I am definitely going back next year!

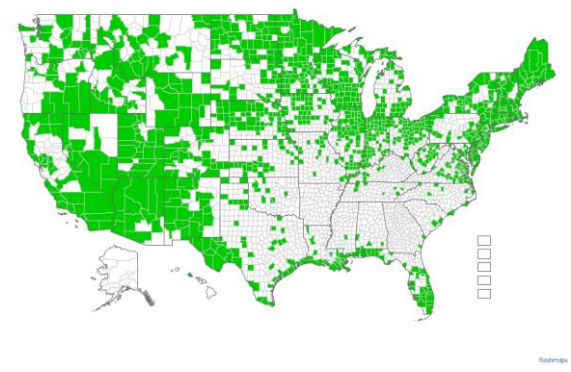
Herbicide Treatment of Phragmites (Giant Reed) To Occur Along Green Bay Shoreline

By Greg Cleereman, Marinette County Conservationist

The Green Bay shoreline in Marinette County, from UW-Marinette south to Little River, will be treated with an herbicide to control the invasive plant species Phragmites (*Phragmites australis)*, also known as Giant Reed. Approximately 30 acres of Phragmites scattered along two miles of shoreline will be treated. All spray activities will occur below the ordinary high watermark.

A map of the proposed spray area can be found at the Marinette County website *www.marinettecounty.com*. Additional information, including the exact time of the herbicide treatment, will be posted on the website. The spray will NOT be applied by aircraft.

Phragmites is an invasive exotic wetland plant. Left uncontrolled, it out-competes native wetland plant species. Growing along lakes and rivers, the plants can reach heights that obscure water views (see photo above). It can grow in dense stands that can block the movement of people and wildlife. Phragmites is poor habitat for most wildlife. It is found along waterways and shorelines throughout the United States as shown on the map below.



In 2014, the Wisconsin Department of Natural Resources and Ducks Unlimited obtained a grant to treat the Green Bay shoreline of Marinette and other counties with an herbicide to control Phragmites. This project will treat the shoreline not sprayed last year. Marinette County has obtained a sub-award under the original grant to administer this local project.

Recent History of Phragmites Treatments

For many years, Phragmites growth along the Green Bay West shores had spread unchecked on exposed lakebed caused by historic low water levels. In 2010, the Wisconsin Department of Natural Resources received a grant of $805,600 from the Environmental Protection Agency *Great Lakes Restoration Initiative* to remove Phragmites and restore coastal wetland habitat.

Large scale treatments along the shoreline began in 2011. Because most of the thick, tall stands had never been treated prior to 2011, most of the initial control work along the western shores of Green Bay had to be done by using a helicopter equipped with a boom sprayer. The herbicide used (*Imazapyr*, brand name Arsenal®) is absorbed by the plant and effectively travels to the roots, where it does its damage. The 2011 treatments were carried out after Labor Day because the most effective time to treat Phragmites is early fall before the first frost or freeze. This timing is important for herbicide effectiveness, when the plants are taking nutrients, along with the herbicide, down to their roots.

Results of herbicide treatment at Michaelis Park, on Shore Drive in Marinette

For more information about this project or other Phragmites-related questions, please contact the Land & Water Conservation office at 715-732-7780.

"Every Kid in a Park" Initiative for 2015-2016

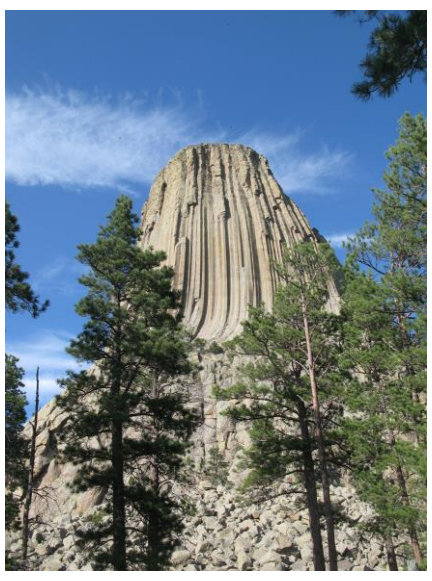
By Richard Louv, from: http://blog.childrenandnature.org

This school year, fourth graders in the United States and their families will be entitled to free admission to America's national parks, federal lands and waters. The program is part of the White House's "Every Kid in the Park" initiative, in collaboration with the National Park Service and the National Park Foundation. "In many provinces in Canada, ski resorts give a free season pass to a particular age of child, and the objective is to introduce kids to outdoor recreation with a view that this will be on their radar," Interior Secretary Sally Jewell said. "It's the same basic principle."

Beginning in the 2015-16 school year, students can sign up online to receive a voucher that grants entrance to the holder and a carload of passengers to federal recreation areas for a year. "There's a difference between seeing a grizzly bear and two cubs on TV and on a screen and seeing them there," in the park, said Dan Wenk, the interim president of the National Park Foundation.

Bison in Yellowstone National Park

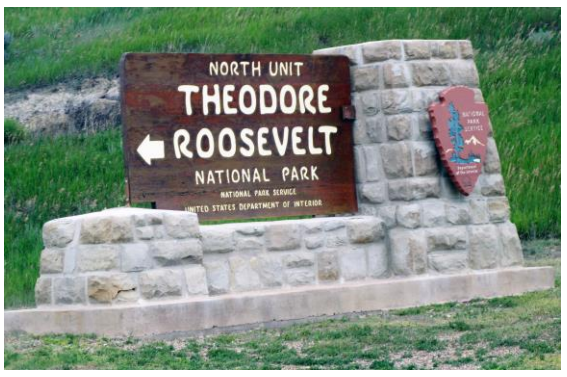
The "Every Kid in a Park" initiative, which begins in September, is an ambitious plan to provide all fourth-grade students and their families with free admission to National Parks and other federal lands and waters. This won't be a one-time-only pass. Children, their families, adult chaperones, and their schools will be able to use the pass for multiple visits over the course of an entire year.



Devil's Tower National Monument

The initiative was launched in anticipation of the 100th birthday of the National Park Service in 2016. The National Parks are often called America's greatest idea — or the second greatest idea, after equality. *However, access to these and other great lands has not been equal.* Anyone can go, if they have the way and the means - but the barriers to the experience, and other meaningful contact with the natural world, are daunting for many children and families, particularly in lower-income neighborhoods. Distance, lack of transportation, the disappearance of school field trips, the overabundance of testing and tech, a general devaluing of nature's gifts, and fear of strangers and nature are all contributing factors.

"Fewer than half of all kids in the United States can safely walk to a park from their home," according to Jackie Ostfeld, citing a CDC statistic. She is co-founding chair of the *Outdoors Alliance for Kids,* one of the many organizations which supports the initiative.



Five Questions about the New White House Initiative

1. Who will pay for "Every Kid in a Park"?
The initiative is a joint effort by the White House, the White House Council on Environmental Quality, the Department of the Interior, The National Park Service, The National Park Foundation, and many non-governmental organizations. Supporters of the initiative are already working to raise millions of dollars from private and corporate contributions to support school trips and to engage educators and parents. The administration's 2016 Budget includes $45 million for youth engagement programs in the Department of the Interior, including bringing 1 million fourth-grade children from low-income areas to the parks and hiring park youth coordinators.

2. Who gets the free passes, and how?
More details are coming, but according to the Initiative's information website, "One way that these passes will be accessible and distributed to 4th graders and their families will be through schools and youth organizations." Through the National Park Foundation, the initiative will provide transportation grants to schools with the most need.

Ice caves at the Apostle Islands National Lakeshore

3. Why is this important to education?
Supporters of the initiative want to encourage schools to incorporate more nature studies into their curricula and to recognize the growing research that suggests improved cognitive functioning in natural environments. It will help schools and families identify nearby public lands and waters and connect with programs that support youth outings, as well as provide K-12 teachers with educational materials, including science labs, lesson plans, and field trip guides. In addition, the Park Service, BLM, Forest Service, Fish and Wildlife Service, NOAA, and the Department of Education will promote a national network of field classrooms and agency resources for teachers, families, and volunteers.

4. How will this benefit the parks and other federal lands and waters?
Some observers worry that busloads of kids may hurt fragile environments, and they're right–if the students are poorly supervised. But if future generations do not experience these parks, the constituency for them will shrink – and so will support for protecting endangered species. Officials hope the push will introduce young people to potential careers connecting people to nature.

Grand Teton National Park

5. Why not make this available to all children?
That's a logical question, especially considering that the hike in park admission fees in recent years is one of the barriers. The initiative is starting with an invitation to 4th graders "because we know that children who interact with nature and natural areas before age 11 are more likely to have positive attitudes toward nature and the environment as adults," says Theodora Chang, National Park Service Special Assistant to the Director. "Fourth grade is also when many schools are teaching local, state, and national history, and many of our parks, lands and waters units have already developed programs for this age group." Let's hope this good initiative evolves beyond fourth grade, and seeds the idea that our public parks should be free to all children. In the meantime, government, parent-teacher organizations, conservation groups, and others should amp up their efforts to educate the nation's educators, parents and grandparents about already existing discount passes for families with kids of all ages.

Isle Royale National Park

As *Forbes* magazine points out, the parks aren't a bad deal, when compared to other forms of recreation. "Going to a movie for a family of four can cost around $80. Bowling for four for two hours on a Saturday can cost around $90, not including food. Normally an unlimited [annual family] pass to the parks costs $80; it's free for members of the military and those with permanent disabilities. Seniors can get a $10 lifetime pass" - and using that pass, grandparents and can fill their cars with kids.

One last point - *people may disagree about the means while agreeing in the end*. Among the first government supporters for the children and nature movement were Republicans, Interior Secretary Dirk Kempthorne and then-U.S. Park Service Director Fran Mainella. In recent years, First Ladies Michelle Obama and Laura Bush, along with many others in both parties, have shared their concern about the nature-deficit among our children – so this initiative has received broad support. Ultimately, the government can only serve as an additional catalyst for the wider *cultural* movement to reduce our society's nature-deficit disorder, and to connect children, their families, and their communities to the natural world. ***All of us can do more to get more kids into more parks.***

A group fills the trunk of a fallen tree in Olympic National Park

For more information visit these sites:

- ✓ *http://findyourpark.com* – initiative home page
- ✓ *http://www.nps.gov* – National Park Service
- ✓ *http://nationalparks.org* - National Park Foundation
- ✓ *http://outdoorsallianceforkids.org*
- ✓ *http://www.childrenandnature.org*

Area Farmers' & Flea Markets

Marinette Main Street Farmers Market
Open Friday, June through the end of September from 9am-2pm by the Welcome Center at 1680 Bridge Street. Cost for Vendors is $5 for daily spot, $50 for seasonal spot. First come, first served. New Vendors always welcome. Forms available at the Welcome Center. Call Sarah Monahan at Marinette City Hall 715-732-5139 or the Welcome Center at 715-732-4333 for more information.

Crivitz Flea & Farmers' Market
'Downtown' across from Village Hall & St. Mary's Church on Thursdays (May 21 – September 3). 8am – 4pm Handmade Arts & Crafts, Antiques & Collectables, Wood products, Vegetables, Clothes, Jewelry, Canned items, Plants and so much more! Come check out the assorted vendor items, visit local businesses and chat with our vendors. For vendor information, please call Barb Uhl at (715) 854-2030.

Marinette & Menominee Community Flea Market - Marinette and Menominee flea markets will be held the 2nd Saturday of each month at the M&M Plaza in Menominee from 7am- 2pm. Vendor space is free but is first come – first served. Vendors are asked to set up near the old car lot south of Mikolas Jewelry store. (No rain dates). All vendors are asked not to sell fruit, food or baked goods. Have questions call 906-863-4808 or *hbayerl@hotmail.com*.

Menominee Historic Downtown Farmers Market - June through beginning of October. Saturday from 8am-Noon, and Wednesday from 3-6pm. The Farmers' Market is located at 1st Street and 8th Street (across from the bandshell) in Menominee, MI. For more information, contact Lucy Pier at 906-863-8718, or visit *www.menomineefarmersmarket.com*.

Menominee County Farm & Food Exchange
Located at the VFW Hall, 3937 10th St./Hwy. 41 in Menominee. Food and favorites from local producers 9 a.m. to noon most Saturdays. For more information call (906) 639-3377 or visit Facebook at *https://www.facebook.com/MCFFExchange*.

For more information about area markets, visit Marinette County's tourism website at *www.therealnorth.com* or call the Mariette/Menominee Area Chamber of Commerce at 715-735-6681.

What Saves Money & Energy, Prevents Pollution, and Creates Jobs? Recycling!

By Danielle Budish, Land Information Department LTE

Recycling is a daily activity anyone can do. Materials such as glass, aluminum and steel cans, plastic and paper are all recyclable. Recycling saves resources, prevents pollution, supports public health, and creates jobs.

Where do the items we recycle go?

- ✓ Glass bottles become new glass bottles.
- ✓ Aluminum cans are turned back into aluminum cans, and can be recycled almost indefinitely.
- ✓ Steel cans are used in other steel products such as car parts and construction materials, and can also be recycled over and over again.
- ✓ Plastics are recycled into carpet, clothing, auto parts, building materials, and new bottles.
- ✓ Paper is recycled into new paper. Some grades of paper can be recycled up to seven times.

Many local recycling programs and drop-off centers accept additional materials for recycling, so be sure to check with your local program or recycling hauler for a complete list of what can or cannot be recycled.

Pollution

Landfills are the third largest source of human-caused methane (CH4), a greenhouse gas 21 times more powerful than carbon dioxide. According to the EPA all landfill liners will eventually fail, releasing toxic leachate ('garbage juice') that can contaminate soil and groundwater supplies. Leakages can cause serious environmental, animal, and human health concerns. The good news is that recycling can help prevent this from happening!

Recycling creates a closed-loop system where unwanted products are returned back to manufacturers for use in new products. This helps prevent environmental damage through pollution and destruction that occurs when mining for metals, drilling for petroleum, and harvesting trees.

Money & Energy

Recycling saves on energy costs. *Ecocycle.org* states by recycling about 30% of our waste every year, Americans can save roughly 11.9 billion gallons of gasoline, reduce greenhouse gas emissions, and take approximately 25 million cars off the road. Some states have a money incentive on recyclable bottles and cans. For example, in Michigan people are charged a $0.10 deposit for each can or bottle purchased. In order to get that money back, people need to recycle.

When we make new products out of raw materials, we burn energy like fossil fuels to extract and process those materials. However, if we manufacture products using recycled materials, we reduce the need for raw materials and save the energy required to extract and process them.

Jobs

Recycling means job local creation. **For every one job at a landfill, there are 10 jobs in recycling processing and 25 jobs in recycling-based manufacturing.** By actively participating in recycling we can grow our economy, create jobs, protect our environment, and address climate change. *Remember - Reduce, Reuse and Recycle.*

Tips on saving money by recycling:

- ✓ *http://dnr.wi.gov/topic/recycling/outreach.html*
- ✓ *https://www.virgin.com/unite/business-innovation/top-10-ways-save-money-recycling*
- ✓ *http://www.recycling-revolution.com/recycling-benefits.html*
- ✓ *http://valuestockguide.com/recycling-saves-money/*

Northwoods Journal Online

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Spinning an Autumn Tale – All About Spiders

Reprinted from Lake Tides, Volume 36, No. 4, Fall 2011

From films and fears and children's songs, the spider has earned a reputation for being a creeping, crawling, skin biting, web-spinning spokesperson of spooky. This time of year spiders are a common sight. Aside from Halloween decorations, real spiders are taking refuge from the cold-coming winter in the attics, garages, and wood piles of their reluctant landlords. Most people don't take much time apart from the moments it takes to sweep a broom or stomp a foot to consider spiders or the fascinating lives they lead.

Spiders are ***arachnids***, a class of invertebrate animals that are distinguished from insects by having eight legs instead of six. Approximately 40,000 different species have been identified worldwide on five continents; over 500 species reside in Wisconsin. In addition to their eight legs, spiders also have ***chelicerae*** (pinchers), venomous fangs, and anywhere between zero and eight eyes. But what really sets the spider apart is the web she weaves.

The picturesque spider web most familiar to people is the spiral orb web; however there are many different kinds of webs and habitats in which spiders reside. Tangle webs or cob webs are often seen in neglected ceiling corners. There are also funnel webs, tubular webs, sheet webs, and tent webs. Some spiders bypass the web thing altogether and instead live underground, in natural debris, or even submerged under water!

While a spider may or may not spin a web, all spiders produce ***silk***. Spider silk is incredibly strong; pound for pound it's stronger than steel! It's also incredibly elastic and can stretch up to four times its original relaxed length before breaking. Spider silk has many different uses, and because of this, there are many different types. A single spider can produce several different types of silk from different glands. **Dragline** silk, for example, is used for the outer rim and spokes of an orb web while the much tougher ***aciniform*** silk is used to wrap captured prey. In all, there are seven different silk glands for producing different types of silk.

One of the most fascinating uses of silk is the act of **ballooning**. Ballooning, also known as *dynamic kiting*, is a process by which a spider, typically a small spider, can launch itself into the air. The spider begins by climbing as high as it can. It then stands on raised legs, abdomen pointed upwards. This is called "tiptoeing." It then releases anywhere from tens to hundreds of fine silk strands, called *gossamer* or *balloon silk*, which forms a triangular sheet that acts as a parachute, then lifts the spider away. While most spiders only land a few yards from where they began, spiders have been known to survive in the currents of jet streams, without food, for over 25 days. Many sailors have reported spiders being caught in the sails of their ships even miles from land.

Given its remarkable strength and elasticity, one could only imagine the human uses of spider silk. Unfortunately, spider silk is difficult to harvest in any quantity. Attempts have been made to re-create spider silk synthetically in a lab, but the substance and the exact mechanics by which a spider spins her web are enigmatic and have eluded scientists for years. However, recently the Universities of Wyoming and Notre Dame have created a genetically altered silk worm that produces a silk very similar to that of a spider. In 2010, it was announced at a press conference that the effort had been successful.

While they've been few and far between, there are some notable human uses for spider silk. Peasants living in the mountains of Eastern Europe used to cut up spider tubes built by the Atypus spider and cover their wounds. It reportedly facilitated healing due to the antiseptic properties of spider silk in addition to vitamin K, which is essential to the process of blood clotting. Fishermen in the Indo-pacific Ocean use spider web to catch small fish; at one time it was common to use spider silk for crosshairs in optical instruments. Because of the difficulties involved in keeping spiders captive, as well as the tedious silk collecting process, silk production is usually left up to the silk worms. However, one piece of spider silk exists today. It took more than a million spiders, seventy workers, and four years to create, but in 2009 Nicholas Godley and Simon Peers produced an eleven-by-four foot textile courtesy of the Golden Orb spider.

Spiders aren't just interesting to learn about, they're a significant benefit to humans as well as the environment. As predators, spiders help control bug populations in agricultural areas and residential zones. Bugs that destroy our crops and cockroaches that infest our homes are kept at bay by spiders. As prey, spiders are an important food source for wasps, lizards, birds and other animals. Many birds also depend on spider silk for nest construction. An important aspect of nearly every ecological system on earth, spiders deserve more credit than they receive.

Goldenrod Crab spider awaiting prey

Fishing spiders, also known as dock spiders, are the largest spiders in the Upper Midwest. Their bodies grow to be one inch, with a leg span that can cover up to four inches. They're typically seen around ponds, swamps, and streams nearby vegetation. These hunters can skate across water and dive underneath for prey. In addition to insects, fishing spiders often eat small vertebrates such as frogs, tadpoles and fish!

The name "daddy long legs," given to bugs with exceptionally long legs, can refer to harvestmen (*opiliones* – not spiders, but are arachnids), cellar spiders (*pholcidae*), or crane flies (not arachnids). One famous myth claims that daddy long legs are some of the most poisonous spiders in the world, but their fangs are so small that they cannot penetrate skin. And although many arachnid species are venomous, this myth has been debunked by the Myth Busters and Bill Nye, The Science Guy.

4th Annual Halloween Family Fun Fest at Harmony Arboretum

Saturday, October 17, 2:30-6:00 p.m.

Visit the Children's Learning Garden at the Harmony Arboretum for a 'spooktacularly' good time! Crafts, games, storytelling, pumpkin decorating, refreshments, a costume parade and more for the whole family! *The event is free, but non-perishable food item donations are encouraged.*

Mrs. Ketchup & Mrs. Mustard lead the costume parade!

Exploring the elements of the Children's Garden

Pumpkin Bowling!

This little shark makes a new friend!

Visitors investigate the sensory boxes and try to guess what they contain – spider's legs, eye of newt, hair of troll!

For questions or to volunteer for this event, please call the UW-Extension office at 715-732-7510, or email gthompson@marinettecounty.com.

Hydraulic Suction Harvester

By Danielle Budish, Land Information Department LTE

In 2012, the Marinette County Land & Water Conservation Division received a Wisconsin Aquatic Invasive Species (AIS) Control Grant to build and operate a Hydraulic Suction Harvester to help control Eurasian water milfoil (EWM) on area lakes. The county's AIS grant calls for using the harvester as part of an integrated invasive species management plan on Thunder, Beecher and Little Newton Lakes.

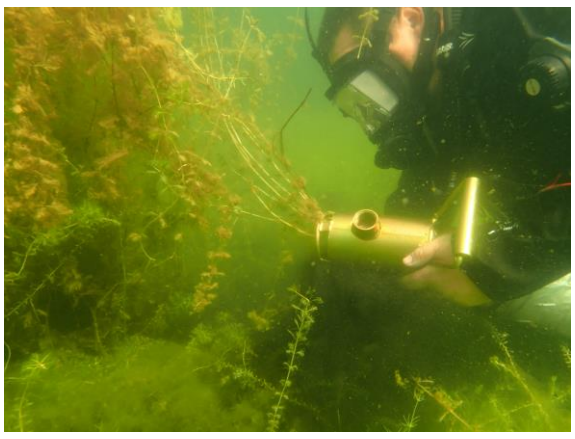
The harvester is a retrofitted pontoon boat. Below, LWCD staff prepare for a day on the water.

Unlike many other plants, Eurasian water milfoil does not rely on seeds for reproduction. It reproduces primarily by fragmentation, allowing it to disperse over long distances. Fragmentation occurs when the plant breaks apart often by wind, waves, and boats. Each fragment of the plant has the ability to sprout roots and grow a new plant. The rapid spread and growth of the plant leads to blockage of sunlight needed for native plants, often resulting in single habitat stands. Single habitat stands threaten the aquatic plant and animal communities by disrupting predator-prey relationships by fencing out larger fish, and reducing the number of beneficial native plants available for waterfowl, fish, and other aquatic life.

If left uncontrolled, EWM can fill a waterway or lake, choking off sunlight to other plants

Hydraulic harvesting is used to control scattered and/or low density EWM populations while large dense stands are better controlled using aquatic herbicides. Harvesting is a team effort requiring hours of fairly intensive physical labor. The harvesting crew typically consists of two divers who rotate shifts underwater and an onboard crew member, who ensures the safety of the diver, tends the diver's air supply, maintains the harvester, and bags plants. On a typical day, the crew goes out on the lake in the early morning and works all afternoon. The day consists of using a GPS to locate and mark sites infested with EWM. Once sites are located, the harvester is then anchored near the area and the diver prepares to dispatch. The diver uses a 40-foot long suction hose to remove the milfoil and its roots from the lakebed. The harvested plants are then transported to the surface and deposited onboard where the crew member can bag them for disposal.

Above, the diver prepares the hose; then EWM is sucked up the hose to the harvester (below).



Above, EWM is transported to the harvester via the hose, and below the author is disposing of EWM.

After only three summers, it already appears that the harvester is successfully controlling the growth and spread of EWM on project lakes. On Little Newton Lakes, harvesting has been so successful that fewer than a dozen plants were found in 2014 and 2015. On Thunder Lake, suction harvesting in a test plot has resulted in the complete control of EWM after only two years. These experiences show that while eradication of EWM may not be possible, suction harvesting is a valuable tool for the management and control of EWM on area lakes. For more information, please contact the LWCD at 715-732-7780.

When Leaves Fall, Fire Danger Rises

As September ushers in the start of a new school year, Mother Nature begins her process of settling down for the winter. Leaves turn colors and fall from trees; plants and grasses go dormant, leaving only crispy brown remnants of their green summer glory. ***And, as the temperatures and leaves drop, the risk of wildfires rises***.

Wildfires occur any time of the year when the ground is not snow covered. The air temperature can be below freezing or well above 80. This wide range of conditions - combined with campfires and the burning of leaves, brush, and even trash - increase the opportunities for fires to escape and burn natural resources and personal property.

In Marinette County, the main causes of wildfires during fall are trees and limbs falling on power lines, campfires, lightning, logging or farm equipment, burn barrels, leaf and brush burning and ash disposal. Taking precautions any time you use fire outdoors is key to preventing wildfires and paying a hefty suppression bill should you start one.

Burning trash on the ground or in barrels in unhealthy and illegal and could result in a wildfire that costs you!

If you use a woodstove or fireplace for heating your home, empty ashes into a metal container with a tight fitting lid or dump ashes onto bare soil then drown the ash with water and stir until you're sure no hot embers remain. The same goes for campfires, burn barrels and burned leaf and brush piles – before you leave the area, drown the ashes, stir, and keep adding water until all smoke is gone.

Put out by drowning them with plenty of water.

Keep aware of fire danger year-round by bookmarking the DNR's fire Web page: *dnr.wi.gov* (keyword 'fire'). For those of you with smartphones, the state map of fire danger is now mobile-friendly.

Wisconsin has a long history of destructive wildfires. Oct. 8 will be the 143rd anniversary of the Peshtigo Fire, considered to be our nation's deadliest fire. The Peshtigo Fire burned more than a million acres of northeastern Wisconsin and upper Michigan, destroyed 12 communities, and took an estimated 1,200 to 2,400 lives. To increase fire awareness in Wisconsin, a 2015 "Wildfires of Wisconsin" calendar was created featuring historic wildfires in our state. For a free copy of the calendar, send an email with your name and address to *Jolene.ackerman@wi.gov* or call 608-267-7677.

Apple & Pear Tree Pest Diagnosis and Management

By Scott Reuss, Marinette County UW-Extension Agriculture & Horticulture Agent

The process of harvesting fruit from home fruit trees usually involves some observations on various pest issues that have affected the tree(s) over the course of the growing season. Here we'll take a look at the main pest problems found in our area on apple and pear trees, what they look like, and simple management tips.

Leaf lesions

Spots on leaves can be caused by many different diseases and a few arthropods. On apple trees, the question is if the spots are fairly round with fairly distinct edges, or if they are various shapes with feathery edges. The round, distinctly edged spots (usually with raised bumps in the middle) also often are multi-colored and are caused by one of the rust (fungal) diseases – usually **cedar apple rust** or **hawthorn rust**. The feathery edged lesions are caused by **scab**, which is the most common disease of apple and pear trees in our area, affecting both the leaves and the fruit. Management of fungal leaf spotting diseases includes raking leaves away from the tree in the fall, minimizing rust species' secondary hosts (true cedars usually), buying resistant cultivars, and potentially using fungicide sprays early in the next growing season.

Scab on an apple tree

Other leaf lesions include small, yellow spots or grayish spots - these usually indicate **spider mite** or plant bug **feeding** damage. These critters are generally worse in drier years, especially spider mites which are small enough to simply be washed off the leaves with a water spray. On pear trees, you may find small, oval, black lesions usually parallel to the midrib of the leaf. These lesions are caused by the **pear leaf blister mite**. This mite can become very severe, especially on younger trees, leading to early defoliation & fruit affliction. They overwinter in the buds, so control options include dormant sprays of dormant oil and/or lime sulfur or early season insecticide sprays when the leaves are about half to three-quarters size.

Spider mite damage

Other leaf issues you may see are related to **early-season insect damage**. There are many different species of leafrollers and leafminers that will create dead spots on leaves. Leafroller damage will appear as brown areas on the leaf that you can nearly see through, possibly with webbing still visible. Leafminers cause separation of the layers of the leaf, with associated graying of the tissue.

Above: Leafminer damage; below: leafroller

Branch dieback

Branches die back naturally as trees age and have wounds or growth constrictions. So, finding an occasional dead branch on older trees should not be overly alarming. However, on younger trees, it indicates a problem. The most common causes of branch dieback are injuries, cankers, and physical damage from other branches. When trying to deduce the cause of a branch death, search the entire branch for sunken areas in the bark, weeping areas on the bark, or areas of damaged bark. Once you find this type of area, prune below it to get in front of any potential pathogens.

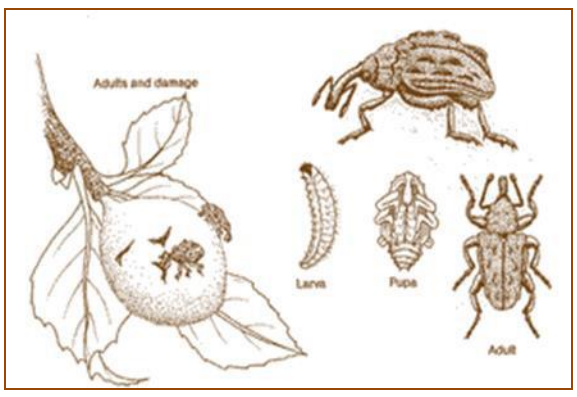
The most concerning possibility of branch death is a bacterial disease called **fire blight**. This disease usually results in smaller branches dying with distinct symptoms. These symptoms are a very dark brown to black leaf and twig discoloration and a bending over of the tip of the branch into a shepherd's crook formation. If you feel this may be a possibility, make sure to get a firm diagnosis of the issue from your local UW-Extension. Management includes pruning at least 8 to 12 inches below where you can see sunken bark on the branch and disinfecting your pruning tools thoroughly.

Fire bliaht damaae to leaves

Fruit Problems

The pests that affect fruit are usually the ones that cause the most consternation among home fruit growers – for good reason. We've already discussed the primary disease that affects apple and pear trees – scab. Scab lesions can create two different types of fruit issues. Earlier season infection will create misshapen, usually cracked fruit that will likely not be edible. Later season infection will cause grayish, feather-edged lesions on the surface of the fruit, which can simply be peeled off and the fruit will still be edible. The rust diseases can also impact fruit, generally creating larger lesions with multiple colors and dots in the central portion of the lesion.

There are many insects that negatively affect fruit. There are three that are the most common in our area. The only one that affects *both* apple and pear is **plum curculio**. This early season insect causes mostly cosmetic damage on these fruits, but will occasionally be found in the fruit. The cosmetic damage is scar tissue on the skin of the fruit, usually in half-moon or fan-like shapes, as a result of the adult beetle laying eggs on the young fruit. An early season cover spray with an insecticide or with the physical barrier Surround (a kaolin clay product) that is applied just after petal fall will usually minimize damage from curculio, as well as our next topic of discussion.



Plum Curculio development stages and damage

Another insect that appears in early season, but has two distinct generations, is the **codling moth**. Codling moth is a larger caterpillar, creating actual holes on the outside of the fruit, usually at the petal end or bottom of the fruit. The first generation of moths lay their eggs at the same time as the plum curculio, so can be managed the same way. However, if you have had serious problems with this insect in the past, adding a second insecticide application two weeks after the first will dramatically improve control.

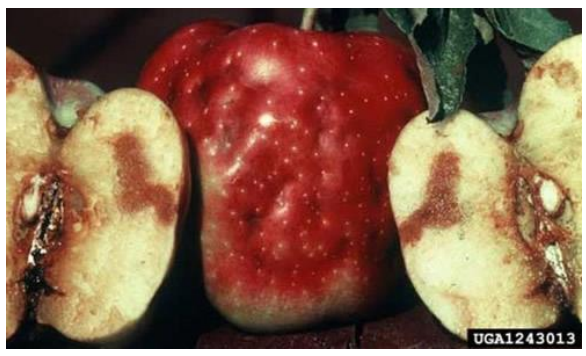
The second generation is the larger, more damaging generation. They lay their eggs in July, leading to the opportunity to find the proverbial half of a 'worm' when you bite into an apple. Timing of fruit protection for the second generation varies from year to year, as their life cycle is temperature-dependent. Monitoring for their presence via pheromone traps, reading the WI Pest Bulletin, or using hanging traps filled with fruit peels, fruit juices, water, and/or apple cider vinegar can help you with insecticide application timing. You can also use these types of traps as a control mechanism, but you will not achieve high levels of control.

Codling moth larva

Continued next page

Apple & Pear Tree Management, continued

The final, usually most problematic, insect in our area is the **apple maggot**. This insect is a late season insect, generally not laying their eggs until August or September. They prefer to lay their eggs in mature softer fruit, leading to higher infestation levels in some cultivars than in others. The larvae of apple maggot tunnel throughout the fruit, usually concentrating their feeding just under the skin and right around the seeds. Their feeding trails will appear as brown trails, leading to one of their common names, 'railroad worm'. The trails become more apparent as the fruits ripen, often leading to unpleasant surprises when you take apples out of storage.



Apple maggot-damaged fruit

Year to year differences in timing may mean that a particular cultivar will be maggot-free in one year and loaded the next. If insecticides are to be used, monitor for their presence or change your timing according to the year's temperatures. Generally, our area sees the main flight of apple maggot in mid-August. In 2014, the primary flight occurred on August 25-28th as it was a cooler year.

Adult apple maggot fly

There are non-insecticidal options to consider, as well. On smaller trees, you can use barrier treatments such as fruit bagging with traditional paper fruit bags, zip-style plastic bags, or cloth sock types. Trapping is also a possibility, but requires many traps. The hanging traps mentioned above will work to some extent, but red sticky sphere traps are usually better on apple maggot. These are apple-sized, red traps that are coated with a sticky product such as *Tanglefoot* (just a representative brand, by no means the only one that works). The adult females are attracted to the red fruits to lay their eggs but then get stuck.

Red sphere apple maggot trap covered in sticky attractant

Concluding remarks

Many pest issues on apple & pear trees can be prevented by cleanliness, scouting, and proper pruning. Raking up and removing leaves and fruit that experienced problems is a good step to help minimize next year's problems. Paying attention to what is occurring over the course of the growing season allows you to get in front of pest problems, rather than losing a significant portion of the crop to a pest you didn't know was present. Lastly, proper annual pruning will create a healthier tree that has better airflow and sunlight penetration throughout the canopy. Air and light penetration generally lead to higher-quality fruit that are less susceptible to many of the pests.

The final thought is to know what you're dealing with. Although this article covers basic information to help diagnose a problem, proper management requires proper identification of the problem. To make sure you know what you're dealing with, bring in your samples to the Marinette County UW-Extension office on the third floor of the courthouse, or call Scott or Gina at 715-732-7510. You can also e-mail *sreuss@marinettecounty.com*, and include digital images of the issues your trees are facing.

For more information about how to manage these pests and diseases, go to:

- *http://learningstore.uwex.edu/assets/pdfs/A2179.pdf* - UW-Extension publication, apple pest management & tips
- *http://www.mda.state.mn.us/plants/pestmanagement/ipm/apple-guide.aspx* - Minnesota Department of Agriculture
- *http://extension.psu.edu/plants/gardening/fphg/pome* - Penn State Extension – information about diseases, pests, control methods, images, etc.
- *http://www.cals.ncsu.edu/plantpath/extension/clinic/fact_sheets/index.php?do=disease&id=7* - North Carolina State University fact sheet
- *http://www.planetnatural.com/* - information about pests & diseases, and organic control methods
- *http://www.appleman.ca/korchard/traps.htm* - sticky trap varieties and information

Your county extension office

UW Extension
Cooperative Extension
Marinette County

Grand Opening Event at the Children's Learning Garden a Success!

On July 25th the Harmony Arboretum held the Grand Opening event for the Children's Learning Garden. 200 people attended! Below are some photos from the Grand Opening Event.

Guest Speaker Randy Korb shows his salamander friends.

Visitors learn about the life cycle of Monarch butterflies.

Kids plant their own seeds to take home.

This is the newly-installed donor's plaque at the Children's Learning Garden. The CLG was made possible by generous donors, many dedicated volunteers, and lots of time and effort. The CLG project was started in 2010.

Programs are held at Harmony year-round – see page 8 for a schedule of upcoming events.

Northwoods Journal
Volume 13, Issue 4

The *Northwoods Journal* focuses on outdoor recreation opportunities and local environmental topics to inform readers about natural resource use, management, and recreation in Marinette County.

Published in cooperation by:

- Marinette Co. Land & Water Conservation
- Marinette Co. Parks & Outdoor Recreation
- Marinette Co. UW-Extension

UW-Extension provides equal opportunities in employment and programming, including Title IX and ADA. To ensure equal access, please make requests for reasonable accommodations as soon as possible prior to the scheduled program. If you need this material in another format, please contact the UW-Extension office at 715-732-7510.

Please send comments to:
Marinette County LWCD
1926 Hall Ave, Marinette, WI 54143
abartels@marinettecounty.com

Area Events Calendar

May 28-Sept.3 **Area Museums Open.** Marinette & Menominee County Historical Museums, Peshtigo Fire Museum, Amberg Historical Complex, Busville Doll Museum (Crivitz), Land of Oz Museum (Wausaukee) & West Shore Fishing Museum (M-35 north of Menominee, MI). Visit *http://therealnorth.com/museums.htm*.

September 4 **Summer Concert ~ Falling Waters Winery**, 721 Dyer St, Crivitz. 5~8:30pm Charlie Scoggins.

September 6 **Summer Concert ~ Forgotten Fire Winery** Special Sunday Concert – N2393 Schacht Road, Marinette - Noon to 4 pm Charlie Scoggins

September 6 **Ice Cream Social at West Shore Fishing Museum.** 12-4p.m. Popular family and community picnic offering live music, huge raffle, brats, pie and ice cream, draft root beer, kids' games and play area. Located on M-35 15 miles north of Menominee.

September 12 **Country Fling.** 1pm at Parkway Inn, N9906 Parkway Road in Crivitz. Food, beverages and booyah with music by Donna and the Beelers and Rock n' Randy. For more information call Ronald at 715-757-3451.

September 19 **Halloween Bash**. Held at Green Acres, six miles west of Marinette just off Highway 64. Campsite decorating, trick or treating, pumpkin carving, wagon rides and pot luck. Water and electric sites available. RSVP to 715-789-2130.

September 19 **Oktoberfest in Crivitz**. Crivitz Community Veteran's Park, 510 Louisa Street. 12:00 Noon to 12:00 Midnight. Pumpkin decorating contests, bouncy houses, face painting, Fraulein's Beer Stein Race, yodeling contest, sauerkraut eating contest. Check out *www.facebook.com/OktoberfestCrivitz*. All proceeds benefit the Crivitz Fire Department.

September 26 **Peshtigo Historical Days.** Fire tower walk/run at 8am with registration from 6:30-7:45am. Parade starts at 10:30am. All main events at Badger Park – no admission charged. Activities include: horseshoe tournament, live music from 11:30am to 9:30pm, craft booths, food, balloon jumping equipment and games all day with fireworks at dusk.

October 3 **Wausaukee Fall Festival.** 7th Annual Wausaukee Fall Festival will host over 100 crafters lining the village from North of Jackson Street to Evergreen Plaza on both sides of the Highway. Food, beverage, crafters, horse drawn wagon rides, live music and the event will be held rain or shine. 9am to 3pm. For more information email *fallfestival2@gmail.com* or contact Sharon at 715-927-0049.

October 9 **20th Annual Menominee Animal Shelter Auction**. At Riverside Golf Club, 3459 14th Avenue, Menominee, Michigan. Roaring 20's theme with Italian food! Silent auction items, oral auction and great food. Get your Christmas shopping done early and help our four legged friends. For more information and tickets call 906-864-PAWS.

October 10 **Movie in the Park ~ Badger Park** Free family fun for all ages! Show begins at 6:24 pm. Snacks and beverages available for purchase. Bring your own chairs and blankets. For more information call 715-582-0327. Movie to be determined.

October 17 **Halloween Family Fun Fest 2:30~6:00 pm**
A family oriented event for kids of all ages. A few spooky things to keep you guessing, plus many fun activities to keep all family members busy and active for your entire visit. Hands-on nature, games, a costume parade and learning opportunities are just a few of the activities you can expect. Refreshments are available. Call 715-732-7510 for more information, and see page 4 for photos from last year.

Harmony Arboretum Fall Schedule of Events

Marinette County
Harmony Arboretum
gardens: prairie: hardwood forest
½ mile south of Hwy 64, on County E
Extension : 715-732-7510
Land Information Office: 715-732-7780
http://www.marinettecounty.com

Located seven miles west of Marinette off of Highway 64, then ½ mile south on County E. All programs are free unless otherwise stated. For more information, call UW-Extension at 715-732-7510 or Land & Water Conservation at 715-732-7780.

September 5 – Plant Sale, 9:00 a.m. – noon. Fall is a great time to plant. Plants grown by Northern Lights Master Gardeners will be sold at the Harmony Demonstration Gardens. Proceeds are used for educational programming.

September 10 – Astronomy at the Arboretum 8:00-9:15 p.m. Spend an evening under the stars! Introduction to stars, constellations, star lore, and other space-related topics - includes a stargazing tour. Dress for the weather, hot beverages will be provided; if inclement weather, event will be cancelled.

September 12 – Monarch Fall Migration, 10:00-11:30 a.m. Review the monarch life cycle and migration patterns. Learn how to help them on their long journey to their overwintering site with plants that provide a rich nectar source at this time of year.

September 17 – Pesto Festo, 6:00-7:30 p.m. Celebrate the full variation of pesto possibilities. Discussion will include growing pointers to produce quality plants as well as safe handling and preservation. Many varieties of fresh pesto will be available for taste testing your favorite pesto types.

October 1 – Fall Garden Activities, 5:30-7:00 p.m. Get your gardens ready for 2016 productivity by knowing how to conduct important, yet relatively simple, steps. We will discuss how to prepare your vegetable gardens, fruit growing areas, perennial beds, and woody perennials to help them get through winter in optimum shape and be ready to get growing in 2016.

October 17– Halloween Family Fun Fest, 2:30-6:00 p.m. A family event for kids of all ages. Spooky things, games, & activities to keep all family members busy for your entire visit. Refreshments available for purchase (see page 4 for photos from last year!).

November 12 – Astronomy at the Arboretum 6:30-7:45 p.m. Spend an evening under the stars! Introduction to stars, constellations, star lore, and other space-related topics - includes a stargazing tour. Dress for the weather, hot beverages will be provided; if inclement weather, event will be cancelled.